

CBSE QUESTION PAPER

CLASS-X

SCIENCE

SECTION - A

Q.1. State the effect of a magnetic field on the path of a moving charged particle. *1 Mark*

Q.2. Which system facilitates the communication between central nervous system and other

parts of the body? *1 Mark*

Q.3. Write the characteristic features of the micro organisms which help in the production of biogas in a biogas plant. *1 Mark*

Q.4. On diluting an acid, it is advised to add acid to water and not water to acid. Explain why it is so advised ? *2 Marks*

Q.5. Name first discovered alloy. Give its composition also. *2 Marks*

Q.6. Three resistors of 10Ω , 15Ω and 5Ω are connected in parallel. Find their equivalent resistant.

Q.7. State how the magnetic field produced by a straight current carrying conductor at a point depends on *2 Marks*

(a) current through the conductor (b) distance of point from conductor.

Q.8. (a) Aluminium is a reactive metal but is still used for packing food articles.

(b) calcium starts floating when water is added to it. *3 Marks*

Q.9. Write balanced chemical equations for the following chemical reactions *3 Marks*

(a) Hydrogen + Chlorine \rightarrow Hydrogen Chloride

(b) Lead + Copper Chloride \rightarrow Lead Chloride + Copper

(c) Zinc Oxide + Carbon \rightarrow Zinc + Carbon Monoxide

Q.10. A Compound P forms the enamel of teeth. It is the hardest substance of the body. It doesn't dissolve in water but gets corroded when the pH is lowered below 5.5 *3 Marks*

(a) Identify the compound P

(b) How does it undergo damage due to eating chocolate and sweets ? What should we do to prevent tooth decay ?

Q.11. (i) Carbonate of metal 'X' is abundant in earth crust and its hydroxide is used in 'white washing'. Identify metal 'X'.

(ii) How will you convert this carbonate into its oxide? Name the process and write its equation. *3 Marks*

Q.12. Define alternating current and direct current. Explain why alternating current is preferred over direct current for transmission over long distances. *3 Marks*

Q.13. Two lamps, one is rated 100 W at 200 V and the other 60 W at 220 V, are connected in parallel to a 220 V supply. Find the current drawn from the supply line. *3 Marks*

Q.14. (a) Fuse acts like a watchman in an electric circuit. Justify this statement.

(b) Mention the usual current rating of the fuse wire in the line to

(i) lights and fans (ii) appliance of 2kw or more power *3 Marks*

Q.15. List in tabular form three differences between arteries and veins. *3 Marks*

Q.16. How do auxins help in bending of stem towards light? Explain. 3 Marks

Q.17. What are nephrons ? How is nephron involved in the filtration of blood and formation of urine ? 3 Marks

Q.18. Explain the principle and process of converting ocean thermal energy into electricity 3 Marks

Q.19. Ramu has a piece of agricultural land in a village. He decides to set up a brick factory on it. His friend Shyam persuades him to change his decision in the interest of village because presence of a factory would severely affect the health of villagers as well as agricultural produce of others. Ramu understands and abandons his plans. 3 Marks

(a) Mention the values exhibited by shyam.

(b) Explain how these values helped shyam to save interests of his village

Q.20. (i) Write down the electronic configuration of Magnesium and Oxygen.

(ii) Give two general properties of the compound formed by combination of magnesium and oxygen.

(iii) Show the formation of this compound by the transfer of electrons. 5 Marks

Q.21. (a) Name and describe giving chemical equation the process used for producing sodium hydroxide. Why is this process so named ?

(b) Give one use of each of any two products obtained in this process. 5 Marks

Q.22. (a) A fuse wire melts at 5A .If it is desired that the fuse wire of same material melt at 10 A, then whether the new fuse wire should be of smaller or larger radius than the earlier one ? Give reasons for your answer.

(b) If the radius of a current carrying conductor is halved, how does current through it change ?

Q.23. Define resistance of a conductor. State the factors on which resistance of a conductor depends. Name the device which is often used to change the resistance without changing the voltage source in an electric circuit. Calculate the resistance of 50 m length of wire of cross sectional area 0.01 square mm and of resistivity $5 \times 10^{-8} \Omega \text{ m}$.

5 Marks

Q.24. (i) Describe the process of starch digestion. Specifying site, glands and enzymes used and end products produced.

(ii) Draw the structure of human digestive system and label

(a) pancreas (b) small intestine. *5 Marks*

SECTION - B

Q.25. A student was given four samples of water in four different test tube. These were of distilled water, lemon water, water having dil. HCl in it, water having NaOH in it. For which sample pH value will be 7: *1 Mark*

- (a) lemon water**
- (b) distilled water**
- (c) water with HCl in it**
- (d) water with NaOH in it**

Q.26. A given sample indicates a pH of 7. The sample could be: *1 Mark*

- (a) distilled water**
- (b) antacid**
- (c) blood**
- (d) curd**

Q.27. The chemical reaction between barium chloride and sodium sulphate is an example of : *1 Mark*

- (a) combination reaction**
- (b) decomposition reaction**
- (c) displacement reaction**
- (d) double displacement reaction**

Q.28. A solution has pH4. The solution will be *1 Mark*

- (a) Neutral
- (b) Acidic
- (c) Basic
- (d) Ionic

Q.29. What will be the pH of a basic solution *1 Mark*

- (a) $\text{pH} > 7$
- (b) $\text{pH} = 7$
- (c) $\text{pH} < 7$
- (d) $\text{pH} = 0$

Q.30. If pH of solution changes from 3 to 4, the solution becomes *1 Mark*

- (a) less acidic
- (b) Basic
- (c) More acidic
- (d) Strongly basic

Q.31. Which gas is evolved in the reaction of Zinc metal and NaOH *1 Mark*

- (a) Cl_2
- (b) N_2
- (c) O_2
- (d) H_2

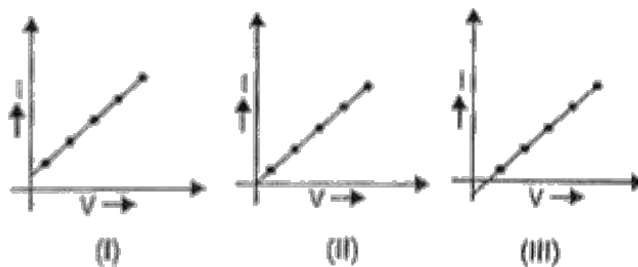
Q.32. Name the scientist who proposed acid- Base theory *1 Mark*

- (a) Arrhenius
- (b) Newton
- (c) Dalton
- (d) Einstein

Q.33. The voltmeter is always connected in the circuit in: *1 Mark*

- (a) Series
- (b) Parallel
- (c) Mixed
- (d) None of these

Q.34. In the experiment on studying the dependence of current (I) on potential difference (V), three students I, II and III took observations and plotted the following graphs between I – V *1 Mark*



The correct graph is of :

- (a) student I only
- (b) student II only
- (c) student III only
- (d) All three students

Q.35. Name the gas evolved when Zinc metal reacts with HCl acid *1 Mark*

- (a) CO
- (b) CO₂
- (c) SO₂
- (d) H₂

Q.36. To perform the experiment of finding equivalent resistance of a parallel combination of resistance, a student should join voltmeter and ammeter with the combination as
1 Mark:

- (a) both in series with it
- (b) both in parallel with it
- (c) ammeter in parallel and voltmeter in series with it
- (d) ammeter in series and voltmeter in parallel with it.

Q.37. What is the important property of an acid? *1 Mark*

- (a) Sour taste
- (b) Soapy touch
- (c) Bitter Taste
- (d) No odour

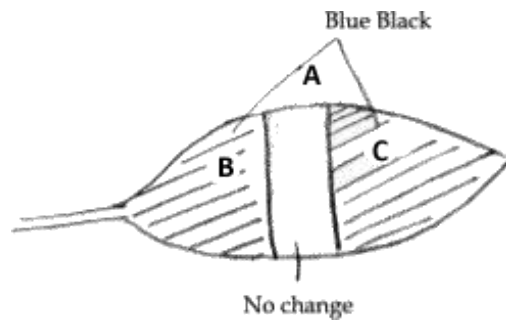
Q.38. A blue litmus paper was first dipped in dil. HCl and then in dil. NaOH solution. It was observed that the colour of the litmus paper *1 Mark*

- (a) Changed to red
- (b) Changed first to red and then to blue
- (c) Changed blue to colourless
- (d) Remained blue in both the solutions

Q.39. Other than light, what else is necessary for photosynthesis? *1 Mark*

- (a) Carbon dioxide
- (b) Water
- (c) Oxygen
- (d) Both (a) and (b)

Q.40.



Above observations were made after testing the leaf for the presence of starch. The inference that can be drawn from it is that the photosynthesis has occurred in:

1 Mark

- (a) portion A only
- (b) portion B only
- (c) portions B and C
- (d) all the portions A, B and C

Q.41. The seeds used in experiment to show that CO_2 is given out during respiration are:-

1 Mark

- (a) Dry seeds
- (b) Boiled Seeds
- (c) Crushed seeds
- (d) Germinated seeds

Q.42. Barium Sulphate is: *1 Mark*

- (a) White
- (b) Yellow
- (c) Green
- (d) Red